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CLAIMS

1. A nucleic acid whose DNA sequence is at least part of the DNA sequence provided in figure 6 or any DNA sequence homologous thereto.

5 2. The nucleic acid of claim 1 wherein said DNA sequence homologous to the DNA sequence of figure 6 is capable, when transferred to a host plant also liable of being rendered resistant by the DNA sequence of figure 6, of also rendering it resistant to Fusarium 2.

10 3. The nucleic acid of claim 1 which is capable, when transferred to a host plant, which is susceptible to a plant pathogen, of rendering said host plant resistant to said plant pathogen.

4. A nucleic acid according to claim 1 wherein said DNA sequence corresponds to a coding sequence starting at nucleotide 1798 and ending at nucleotide 5598 or any DNA sequence homologous thereto.

15 5. A nucleic acid according to claim 1 wherein said DNA sequence corresponds to a promoter sequence located 5' upstream of nucleotide 1798 or any DNA sequence homologous thereto.

20 6. A nucleic acid according to claim 1 wherein said DNA sequence corresponds to a sequence starting at nucleotide 464 and ending at nucleotide 6658 or any DNA sequence homologous thereto.

25 7. A nucleic acid of claim 1 wherein said DNA sequence corresponds to at least part of the genomic insert present in cosmid B22, and preferably corresponds to the overlapping genomic DNA sequence between cosmid B22 and cosmid A55, or any DNA sequence homologous thereto.

30 8. A nucleic acid of claim 7 wherein said overlapping genomic DNA sequence is defined by the left end of the genomic insert present in cosmid A55 and the right end of the genomic insert present in cosmid B22.

9. A recombinant DNA construct comprising a nucleic acid according to any of claims 1-8.

10. A recombinant DNA construct of claim 9 in which said nucleic acid is under control of a promoter which is functional in a plant cell, said promoter being

either endogenous or exogenous to said plant cell, and effective to control the transcription of said DNA sequence in such plant cells.

11. A recombinant DNA construct of claim 10 in which said promoter corresponds to a promoter sequence located 5' upstream of nucleotide 1797 as provided in figure 6, or any DNA sequence homologous thereto.

12. A vector suitable for transforming plant cells comprising a DNA construct according to any of claims 9-11.

13. Plasmid pKGI2-B22 as deposited under number CBS 546.95.

14. Plasmid pKGI2-A55 as deposited under number CBS 820.96.

15. Bacterial cells comprising a vector or plasmid according to any of claims 12-14.

16. Recombinant plant genome comprising, incorporated therein, a DNA construct according to any of claims 9-11.

17. Plant cells comprising a DNA construct according to any of claims 9-11.

18. Plant comprising plant cells according to claim 17.

19. Plant according to claim 18 which has a reduced susceptibility to *Fusarium* 2.

20. Plant according to claim 19 wherein said plant is tomato and wherein said *Fusarium* 2 is *Fusarium oxysporum* f.sp. *lycopersici* race 2.

21. Seed comprising a DNA construct according to any of claims 9-11.

22. The recombinant plant genome of claim 16, in a plant cellular environment.

23. Process for obtaining plants having reduced susceptibility to a fungus, comprising the following steps:

- i) inserting into the genome of a plant cell a DNA construct according to any of claims 9-11,
- ii) obtaining transformed plant cells,
- iii) regenerating from said transformed plant cells genetically transformed plants, and
- iv) optionally, propagating said plants.

24. Process according to claim 23 further comprising selecting transformed plants having reduced susceptibility to said fungus.

25. Process according to claim 23 or 24 wherein said fungus is a soil born fungus, and preferably a wilt inducing fungus.

5 26. Process according to any of claims 23-25 wherein said plant is tomato and wherein said fungus is *Fusarium oxysporum* f.sp. *lycopersici* race 2.

27. Process for protecting plants in cultivation against fungal infection, which comprises:

- 10 i) providing the genome of plants with a DNA construct according to any of claims 9-11, and
ii) growing said plants.

28. Process for isolating a nucleic acid according to claim 1-8, comprising the following steps:

- 15 i) screening a genomic or cDNA library of a plant with a DNA sequence according to claim 1-8,
ii) identifying positive clones which hybridize to said DNA sequence,
iii) isolating said positive clones.

29. The process of claim 28 wherein said library originates from a first plant and the DNA sequence belongs to a second plant.

20 30. Process of selective restriction fragment amplification for identifying a nucleic acid according to claim 1-8 using primer combinations identifying at least one of the AFLP markers EM01 to EM18.

31. The process of claim 30 wherein said primer combination identifies AFLP marker EM06.

25 32. An oligonucleotide comprising a DNA sequence which corresponds to at least part of the nucleic acid according to claim 1-8.

33. The oligonucleotide of claim 32, which is of a size sufficient to hybridize selectively to the DNA sequence of any of claims 1 to 8 under stringent hybridization conditions.

34. An oligonucleotide according to claim 32 wherein said DNA sequence corresponds to the sequence starting at nucleotide 3470 and ending at nucleotide 3565.

5 35. An oligonucleotide according to claim 32 wherein said DNA sequence is located at the 3'end, and preferably corresponds to the sequence 5'-AATTCAGA-3', which can prime the synthesis of DNA.

36. An oligonucleotide according to claim 32 wherein said DNA sequence is located at the 3'end, and preferably corresponds to the sequence 5'-TAATCT-3' which can prime the synthesis of DNA.

10 37. A primer combination comprising a first oligonucleotide according to claim 35 and a second oligonucleotide according to claim 36.

38. Diagnostic kit comprising at least one oligonucleotide according to any of claims 32-36.

15 39. Diagnostic kit comprising a primer combination according to claim 37.

40. Process for detecting the presence or absence of a DNA sequence according to claim 1-8, particularly in a plant DNA using a diagnostic kit according to claim 38 or 39.

20 41. A polypeptide having an amino acid sequence having the sequence provided in figure 6 or coded by the corresponding homologous sequence according to claim 1 or 2.

42. Process for the identification of elicitor molecules using the polypeptide according to claim 41 as a receptor molecule.

25 43. A RNA having a ribonucleic acid sequence of a transcript of part or all of the DNA sequence of claim 1 or 2.